

**ALPHABETICAL INDEX
TO THE COMMERCE CONTROL LIST**

This index is not an exhaustive list of controlled items.

Supplement No. 4 to Part 774 – Commerce Control List Order of Review
identifies the steps to follow when reviewing the Commerce Control List.

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Description	ECCN Citation
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Ethyl-NN-diphenylurea (ethyl unsymmetrical diphenylurea)	1C018.d
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Fibrous or filamentary materials	1C010
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Fibrous or filamentary material production equipment	1B001
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Fibrous and filamentary materials development, production or use technology	1E994
Field programmable gate arrays (FPGA).....	3A001.a.7
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Filters, optical	6A994.a
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Finishing machines, gear	2B003
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Fluorinated compounds, unprocessed.....	1C009
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Description	ECCN Citation
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Fluorocarbon electronic cooling fluids	1C006.d
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Foam mirror structures, lightweight	6A004.a.3
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Focal plane arrays, linear & 2D	6A002.a.3
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Framing cameras, mechanical.....	6A203.a.1
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Description	ECCN Citation
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Furnaces	2B226
Furnaces, Chemical Vapor Deposition (CVD), other than those controlled by 2B005.a, designed or modified for the densification of carbon-carbon composites	2B105
Furnaces	2B227
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Gallium organo-metallic compounds.....	3C003
Gallium III/V compound substrates, hetero-epitaxial grown-multi-layer	3C001.c
Gallium nitride (GaN) “substrates”, ingots, boules, or other preforms of those materials.....	3C005
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Gas centrifuge rotor assembly equipment.....	2B228.a
Gas krytron tubes	3A228.a
Gas or full face masks.....	1A004 or 1A995
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Gas lasers	6A005.a
Gas monitoring systems, toxic	2B351
Gas turbine aeroengines, civil non-certified/supersonic	9A001
Gas turbine blade, manufacturing or measuring equipment	9B001, 9B619
Gas turbine blade technology.....	9E003.a, 9E619

Description	ECCN Citation
Gas turbine blades, vanes or tip shroud casting equipment, tooling or fixtures	9B991, 9B619
Gas turbine brush seal production/test equipment	9B003, 9B619
Gas turbine components, solid state joining equipment	9B004, 9B619
Gas turbine engine development systems/instrumentation	9B002, 9B619
Gas turbine engine development control systems or instrumentation	9B002, 9B619
Gas turbine engine propulsion systems assemblies/components	9A003, 9A619
Gas turbine engine technology	9E003, 9E619
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Gas turbine engine monitoring system software	9D619.b.11
Gas turbine engines, parts and components, not controlled by 9A001 or 9A101	9A991, 9A619
Gas turbine engines & assemblies/components, marine	9A002
Gas turbine test/flow modeling software	9D004.a, 9D619
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Gaskets, aircraft/aerospace use	1A001.a, 9A610.x
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Gate silicon intensifier target (SIT) videcon tubes	6A203.b.3.b
Gateways & bridges	5A991.b.4.b
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Glass fiber or filamentary materials	1C210.b
Glass fiber, for optical communications	5A001.c
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Description	ECCN Citation
Glass, high homogeneity.....	6C004.e.3
Global positioning system (GPS) equipment & components	7A005, 7A105 or 7A994
Glove boxes	0B999
Gloves, protective	1A004 or 1A995
Glow discharge mass spectrometers (GDMS).....	3A233.b
Goat pox virus.....	1C352.a.5
Gold (Au) metal vapor lasers.....	6A005.b
GPS equipment, other than those of 7A005	7A105
GPS (Global positioning system) equipment/components	7A005
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Gradiometers & components, gravity	6A107
Gradiometers & components, magnetic.....	6A006
Graphics accelerators or graphics coprocessors	4A003.d
Graphics accelerator development or production technology	4E993.a
Graphite, fine grain recrystallized bulk	1C107.a
Graphite, bulk	1C107.a
Graphite, pyrolytic or fibrous reinforced	1C107.b
Graphite, nuclear-grade, not intended for use in a nuclear reactor	1C298
Gravimeters (Gravity meters) & components, gravity	6A007.a
Gravimeters (Gravity meters) & components, gravity	6A007.b
Gravimeters (Gravity meters) & components, gravity	6A107
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Gravity meters.....	6A997
Gravity gradiometers & components	6A007.c
Gravity meters (gravimeters) & components.....	6A007.b
Gravity meters (gravimeters) & components.....	6A007.a
Gravity meters (gravimeters) software	6D003.g
Gravity gradiometers & components	6A107
Gravity meters (gravimeters) & components.....	6A107
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Grinding machines	2B001.c
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Description	ECCN Citation
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Gun, stun	0A985
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Gyro tuning test stations	7B003 or 7B101
Gyro run-in/motor test stations	7B003 or 7B101
Gyro evacuation/fill stations	7B003 or 7B101
Gyro-astro compasses & devices	7A104
Gyros & gyro components	7A102
Gyros.....	7A002
Gyroscope production/manufacturing/test equipment	7B003
Hafnium oxide (hafnia) (HfO ₂) made/coated crucibles	2A225.a.5
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Hafnium fluoride (HfF ₄) glass	6C004.e
Hair type absorbers	1C001.a Note 1.a
Handcuffs.....	0A982
Handling equipment for propellants and their constituents	1B115
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Harnesses, complete.....	9A992, 9A610.h
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Helminthosporium oryzae (Cochliobolus miyabeanus).....	1C354.b.2

Description	ECCN Citation
Hemishell dimensional inspection equipment/systems	2B006.c
Hendra virus (Equine morbillivirus).....	1C351.a.12
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High power pulse shaping networks	3A999.c
High voltage capacitors.....	3A999.c
High voltage triggers.....	3A999.c
High-speed pulse generators	3A230
High-speed cameras	6A003
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HIPS (Hot Isostatic Presses)	2B204
HIPS (Hot Isostatic Presses)	2B004
HIPS (Hot Isostatic Presses)	2B104
Hogcholera virus (swine fever virus).....	1C352.a.7
Holding or storage vessels, critically safe & resistant to nitric acid	0B006.e
Hollow cylinder centrifugal balancing machines	2B229.b
Holographic sights	0A987
Honing machines, gear	2B003
Honing machines, gear.....	2B003
Hopping code generation capability, equipment with	5A002.a.5
Horses by sea	0A980
Hoses (brake) for ground vehicles	0A606.y.1
Hoses (cooling systems) for ground vehicles	0A606.v.7
Hoses (fuel) for gas turbine engines	9A619.y.3
Hoses (fuel and hydraulic) for military aircraft	9A610.y.10
Hoses (hydraulic system) for ground vehicles.....	0A606.y.10
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Hoses (pneumatic) for ground vehicles	0A606.y.13
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Hot isostatic densification technology/data, Al/Ti/Superalloys.....	2E003.b.2.d
Hot isostatic presses (HIPS).....	2B004
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Description	ECCN Citation
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Hybrid rocket motors and components	9A109
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Hydraulic fluids	1C980
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Hydraulic stretch-forming machines and dies technology.....	2E003.c
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Hydrogen isotope storage & purification systems	1B231.b.2
Hydrogen refrigeration units.....	1B231.b.1
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Hydrophone arrays, towed acoustic	6A001.a.2.b
Hydrophone arrays (towed) acoustic data processing source code	6D003.a.2
Hydrophones	6A001.a.2.a
3-Hydroxy-1-methylpiperidine	1C350.d.8
Hydroxy-terminated polybutadiene (HTPB)	1C111.b.2
ICP/MS (Inductively coupled plasma mass spectrometers)	3A233.a
III/V and II/VI semiconductor materials purifying or processing equipment	3B991.b.1.b
III/V compound substrates, gallium or indium	3C001.c
Identification plates for gas turbine engines	9A619.y.7
Igniters	1C018.e or 1C992.f
Image enhancement, digital equipment	4A003
Image enhancement equipment.....	4A994.f
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Description	ECCN Citation
Imaging device manufacturing equipment and systems	3B991.b Note
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Image transfer equipment	3B991.b.2
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Imprint lithography equipment	3B001.f.2
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Induction furnace, vacuum.....	2B226
Inductively coupled plasma mass spectrometers (ICP/MS)	3A233.a
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Industrial process control hardware/systems designed for power industries controlled by 1B999, software for.....	1D999.a
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Inertial measurement equipment.....	7A003
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Inertial navigation, systems/equipment/components	7A003
Inertial navigation systems not controlled by 7A003 or 7A103	7A994
Inertial navigation system software, source code	7D002
Inertial reference Systems (IRS)	7A003.c

Description	ECCN Citation
Inertial sensors, optical fiber.....	6A002.d.3.a
Inflatable boats and components.....	8A992.f
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Influenza virus	1C351.b.1
Information security equipment software	5D992
Information security technology support software	5D002.b
Information security equipment and components, n.e.s.	5A992
Information security software	5D002
Information security systems/equipment/devices/components.....	5A002
Information security technology	5E992
Information security - test, inspection, and production equipment	5B002
Infrared detectors, industrial space qualified	6A002.a.1
Infrared sensors, industrial	6A002.c
Infrared viewers (police model).....	9A980
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Injector (free electron laser photo) manufacturing or inspection equipment.....	6B995.a.2
Inorganic overlay coating application technology	2E003.f
Inorganic chemicals listed in Supp. No. 1 to part 754 produced or derived from the Naval Petroleum Reserves	1C980
Inorganic fibers & filamentary materials	1C010.c
Inspection equipment (linear-angular for hemishells)	2B006.c
Inspection equipment for composite materials	1B001.f
Inspection machines (dimensional), devices or systems, other than those in 2B006	2B206
Instruction generators for machine tools - technology	2E003.d
Instrumentation for gas turbine development	9B002, 9B619
Instrumentation for wind tunnels	9B005
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Instrumentation cameras	6A003.a
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Integrated circuit, Direct Digital Synthesizer (DDS).....	3A001.a.13
Integrated circuit test equipment, microwave	3B002.c
Integrated circuit test equipment, for (truth table) testing	3B002.b
Integrated circuit, masks	3B001.g
Integrated circuits, compound semiconductor	3A001.a.11
Integrated circuits, custom	3A001.a.10
Integrated circuits, general purpose	3A001.a
Integrated circuits, microwave	3A001.b.2
Integrated circuits, radiation hardened.....	3A001.a.1
Integrated circuits and assemblies manufacturing equipment and systems	3B991.b
Integrated circuit and assembly testing equipment	3B992.b.4.b
Integrated circuit computer-aided-design (CAD) software	3D003

Description	ECCN Citation
Integrated circuits and assemblies inspection or testing equipment and systems.....	3B992.b
Integrated flight instrument systems/components	7A103.b
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Integrated Services Digital Network technology	5E991
Integrated system source code, avionic/mission systems	7D003.c
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Integration technology for flight management systems.....	7E104
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Interconnect equipment (Computer)	4A003.g
Interconnection equipment.....	3B991.b.1.l
Interferometers, velocity (VISARs).....	6A225
Interlacing machines	1B001.c
Intermediate amplifier equipment.....	5A991.b Note a.3
Interstages for missiles.....	9A117
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Inverse synthetic aperture radar (ISAR)	6A008.d
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Ion beam equipment for mask making/semiconductor devices	3B001.f.2
Ion beam equipment for projection image transfer	3B991.b.2.g
Ion beam sensitive resist materials	3C002.b
Ion beam system, manufacturing, repairing, physical layout analysis and testing of masks or semiconductor devices	3B992.b.6
Ion implantation equipment	3B001.b
Ion implantation equipment	3B991.b.1.g
Ion implantation production equipment.....	2B005.b
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Ion plating production equipment.....	2B005.g
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Ion-exchange processing equipment.....	0B006.c
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Isolators capable of use with biological agents.....	2B352.f.2
Isostatic presses, hot	2B104
Isostatic presses, hot	2B204
Isostatic presses, hot.....	2B004
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Japanese encephalitis virus	1C351.a.13
Jet engine lubricating oil	1C980

Description	ECCN Citation
Jet vane, thrust vector control sub-systems.....	9A106.c
Jet engines/components, pulse	9A111
Jigs and fixtures for use in the manufacture of firearms, ordnance, and other stores and appliances for land, sea, or aerial warfare	2B018.n
Joule-Thomson self-regulating minicoolers	6A002.d.2.b.6
Junin virus.....	1C351.a.14
Kerr or Pocket cells, electro-optical shuttering.....	6A203.b.3.c
Kick motors.....	9A004
Krytron tubes, gas	3A228.a
Kyasanur Forest virus	1C351.a.15
Laboratories (mobile), crime science.....	9A980
Laguna Negra virus.....	1C351.a.16
Laminate or composite development software	1D002
Laminates & composite structures, organic metal or carbon.....	1A002
Laminates, rockets/propulsion systems/space vehicles	9A110
Land inertial navigation equipment	7A003
Land-based gravity meters production equipment.....	6B007
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Laser based linear position feedback units	2B008.a
Laser based measuring instruments	2B006.b.1.c
Laser beam cutting machines (CNC).....	2B001.e.1.c
Laser beam equipment for mask making/semiconductor devices	3B001.f.2
Laser beam lithography mask or reticle fabrication equipment.....	3B991.b.2.d.2
Laser beam systems, for probing semiconductor devices.....	3B992.b.5
Laser communication technique technology	5E001.b.2
Laser diagnostic equipment	6A005.f.2
Laser diodes	6A005.d.1
Laser diodes designed for telecommunication.....	5A991.b Note b.4
Laser gyro mirror characterization equipment.....	7B102
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Laser pointing devices for use on firearms	0A987
Laser radar altimeters.....	7A106
Laser radar or Light Detection & Ranging (LIDAR) equipment	6A008.j
Laser radar systems	6A108
Laser ring gyro test equipment	7B002
Laser, technology	6E003.e
Laser welding machines.....	2B999.c
Lasers	6A005
Lasers	6A205
Lasers	6A995
Lasers for direct write on wafers	3B991.b.2.h
Lassa fever virus	1C351.a.17

Description	ECCN Citation
Lathes (CNC)	2B001.a
Latches for ground vehicles	0A606.y.11
Launch support equipment.....	9A115, 9A610.f
Launch vehicle components/structures	9A010, 9A610.x
Lavatories for military aircraft.....	9A610.y.11
Lavatories for submersible vessels	8A620.y.4
Lavatories for surface vessels of war.....	8A609.y.4
Leg irons	0A982
Lenses for radiation hardened TV cameras	6A203.c
Lidar equipment (Laser radar)	6A008.j
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Life rafts for military aircraft.....	9A610.y.12
Lift fans, for surface effect vessels	8A002.1
Light gas guns(Multistage) systems	2B232
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Light systems, Stroboscopic	8A992.c
Light systems, underwater	8A002.g
Light systems, underwater	8A002.d.2
Light-weight reduction gearing, marine transmissions.....	8A002.o.1.d
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Lights, search	0A617.y.1 and .y.2
Lightweight composite or foam mirror structures	6A004.a.3
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Line terminating equipment.....	5A991.b Note a.2
Linear voltage displacement transformer (LVDT) based instruments	2B006.b.1.b.1
Linear position feedback units or sensors	2B008.a
Linear measuring equipment/instruments.....	2B006.b.1
Linear focal plane arrays	6A002.a.3
Linear-angular inspection equipment for hemisHELLS.....	2B006.c
Liquid oxidizers, various nitrous oxides.....	1C111.a.3
Liquid or water jet cutting machines (CNC).....	2B001.e.1.a
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Liquid rocket propulsion systems & components.....	9A006
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Liquid propellant control systems.....	9A106.d
Liquid propellant rocket engines	9A105
Liquid-liquid exchange columns, for lithium amalgams	1B233.b.1
Lithium metal, alloys, compounds, mixtures, products or devices.....	1C233

Description	ECCN Citation
Lithium isotope separation facilities, plant and equipment	1B233
Lithium amalgam electrolysis cells	1B233.b.3
Lithium amalgam pumps	1B233.b.2
Lithograph templates	3B001.i
Lithography equipment, imprint	3B001.f.2
Lithography equipment, mask making for semiconductor wafer-processing	3B001.f
Lithography mask or reticle fabrication equipment	3B991.b.2.d.2
Lithography software	3D003
Location & object detection systems or transmitting and receiving arrays, acoustic ..	6A001.a.1.b
Logic arrays, field programmable (FPLA)	3A001.a.8
Logic processors and assemblies	4A003
Louping ill virus.....	1C351.a.18
Low Light Level (LLL) camera software	6D003
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Lubricating oil.....	1C980
Lujo virus	1C351.a.19
Lumpy skin disease virus	1C352.a.16
LVDT (Linear voltage displacement transformer) based instruments	2B006.b.1.b.1
Lymphocytic choriomeningitis virus	1C351.a.20
Lyssa virus	1C352.a.8
Machine tools, E-beam	2B001.e.1.b
Machine tools, laser	2B001.e.1.c
Machine tools, numerically controlled	2B001
Machine tools, numerically controlled	2B201
Machine tools, numerically controlled and using a Magnetorheological finishing (MRF) process.....	2B002
Machine tools, numerically controlled, optical finishing	2B002
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Machine tool assemblies, units or inserts	2B998
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Machine tools for generating optical quality surfaces	2B992
Machine tools for grinding (CNC).....	2B001.c
Machine tools for grinding (CNC).....	2B201.b
Machines for milling (CNC).....	2B001.b
Machines for milling (CNC).....	2B201.a
Machine tools for turning, grinding, and milling	2B991.d.1
Machines for turning (CNC).....	2B001.a
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Machine tool rotary position feedback units.....	2B008.b
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Description	ECCN Citation
Machining centers (CNC)	2B201
Machining centers (CNC)	2B001
Machupo virus	1C351.a.21
Magnaporthe oryzae (Pyricularia oryzae).....	1C354.b.6
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Polybutadiene-acrylic acid-acrylonitrile (PBAN).....	1C111.b.4
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Potassium bifluoride	1C350.d.14
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Signature suppression devices, treatments & fittings	1A101
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Spindle assemblies, machine tools.....	2B008.c
Spray booms or arrays of aerosol generating units, specially designed for fitting to aircraft, lighter than air vehicles,” or “UAVs”	2B352.i.2
Spray cooling thermal management systems	3A003
Spray-drying equipment capable of drying toxins or pathogenic microorganisms	2B352.f
Spraying or fogging systems, specially designed for fitting to aircraft, “lighter than air vehicles,” or “UAVs”	2B352.i.1
Spraying production equipment, plasma with controlled atmosphere.....	2B005.d
Spread spectrum development technology techniques	5E001.b.4
Spread spectrum radio equipment.....	5A001.b.3
Spread spectrum spreading code generation.....	5A002.a.5
Spytron tubes, vacuum	3A228.a
Sputter deposition production equipment	2B005.e
Sputtering equipment, magnetically enhanced	3B991.b.1.f
SQUIDs (Superconducting quantum interference devices)	6A006.a.1
Staging mechanisms for missiles	9A117

Description	ECCN Citation
Stainless steel plate	1C999.b
Staphylococcus aureus enterotoxins, hemolysin alpha toxin, and toxic shock syndrome toxin (formerly known as Staphylococcus enterotoxin F)	1C351.d.14
'Star trackers' and components therefor	7A004
Statistical multiplex equipment.....	5A991.b Note a.7
Steam sterilizable freeze drying equipment	2B352.e
Steel, maraging	1C216
Steel, maraging	1C116
Steel, Titanium-stabilized duplex stainless (Ti-DSS).....	1C118
Steel plate, stainless	1C999.b
Stealth materials, coatings and treatments for signature suppression	0C617.a
Step & repeat equipment, semiconductor wafer processing	3B001.f.1
Stirling cycle engine, air independent.....	8A002.j.4
St. Louis encephalitis virus	1C351.a.34
Storage & holding vessels, critically safe & resistant to nitric acid	0B006.e
Storage phosphor image plates	1A999.b
Storage tanks, chemical (capacity greater than 100 L)	2B350.c
Stored program controlled (SPC) switching equipment	5A991.c
Stored program controlled (SPC) switching equipment, equipment for the development of equipment employing	5B001.b
Stored program controlled (SPC) switching equipment, software for the development of equipment employing	5D001.d
Stored program controlled (SPC) switching equipment, technology for the development of equipment employing	5E001.c
Stored program controlled equipment controlled by 3B, software for use of	3D002
Stored program controlled crystal pullers	3B991.b.1.c.2
Straight jackets	0A982
Strap down/gimbal inertial navigation systems or equipment	7A003
Streak cameras, mechanical type	6A203.a.2
Streak cameras, mechanical or electronic	6A003.a.3
Streak tubes, electronic streak cameras	6A203.b.1
Streak cameras, electronic type.....	6A203.b.1
Stroboscopic light systems.....	8A992.c
Structural composites production equipment	1B101
Structures and composite structures, laminate, and manufacturers for missiles.....	9A110
Stun guns.....	0A985
Stun cuffs	0A982
Subcavitating hydrofoils	8A002.m
Submarine diesel engines.....	8A620.d
Submarine engines, n.e.s.....	8A992.g

Description	ECCN Citation
Submarine nets	8A620.e
Submarine vessel positioning systems, acoustic	6A001.a.1.d
Submersible systems	8A992.e
Submersible vessels, cargo and transport	8A620
Submersible vessels, military	8A620
Submersible vessels, oceanographic and associated commodities	8A620
Submersible vehicles/vehicle systems, equipment, or components (non-military)	8A002.a
Submersible vehicles/vehicle systems or equipment (non-military)	8A001
Substrate development/production technology, diamond film	3E003.d
Substrates, for X-ray masks	3B991.b.2.b.2
Substrates, hard surface coated	3B991.b.2.b.1
Substrates, multi-layer hetero-epitaxial materials	3C001
Substrates, semiconductor with resist coating	3C002
Substrates with at least one epitaxial layer of silicon carbide, gallium nitride, aluminum nitride or aluminum gallium nitride	3C006
Suits, protective	1A004, 1A995 or 2B352.f.1
Sulphur dichloride	1C350.c.7
Sulphur monochloride	1C350.c.6
Super-ventilated propellers	8A002.o.1.a
Supercavitating hydrofoils	8A002.m
Supercavitating propellers	8A002.o.1.a
Supercomputers, see Computers	
Superconducting quantum interference devices (SQUIDs)	6A006.a.1
Superconductive composite conductor	1C005
Superconductive gates, current switching	3A001.d.1
Superconductive electromagnetic sensors	6A996.b
Superconductive electromagnets or solenoids	3A201.b
Superconductive electromagnets or solenoids	3A001.e.3
Superconductive devices or circuits	3A001.d
Superconductive quantum interference devices (SQUIDs)	6A006.a.1
Superconductive propulsion engines	8A002.o.2.c
Superconductive electromagnetic sensors	6A996
Superconductive electronic device technology	3E003.c
Superplastic forming technology, metal working	2E003.b.1.a
Superplastic forming tools, dies, molds or fixtures	1B003
Superplastic forming technology/data, Al/Ti/Super alloys	2E003.b.2.a
Surface irregularity measuring equipment/instruments	2B006.c
Surface coating & processing equipment	2B005
Surface skimming (shallow bulk) acoustic wave devices	3A001.c.1
Surface acoustic wave devices	3A001.c.1
Surface vessel positioning systems, acoustic	6A001.a.1.d

Description	ECCN Citation
Surface vessels & components.....	8A001 and 8A609
Surface vessels of war and related commodities	8A609
Surface finishing equipment	3B991.b.1.k
Surface-effect vehicles, (fully skirted variety)	8A001.f
Surface-effect vehicles, (fully skirted variety)	8A002.k
Surface-effect vehicles,(rigid sidewalls)	8A001.g
Surreptitious interception devices.....	5A980
Surreptitious interception systems and equipment	5A001.f
Surreptitious interception systems and equipment, software for	5D001 or 5D980
Surreptitious interception systems and equipment, technology for	5E001 or 5E980
Survey equipment, surface vessel	6A001.a.1.a.1
Survey equipment, underwater	6A001.a.1.a.2
Survey systems or transmitting and receiving arrays, bathymetric	6A001.a.1.b
Swine fever virus (African)	1C352.a.1
Swine fever virus (Hog cholera virus)	1C352.a.7
Switch fabric development/production technology	5A991.c.10
Switching devices, modules or assemblies	3A228
Switching equipment, stored program controlled	5A991.c
Synchronous Digital Hierarchy (SDH) technology	5E001.b.4
Synchronous Digital Hierarchy (SDH) technology	5E991.a.2
Synchronous Optical Network technology (SONET).....	5E001.b.4
Synchronous Optical Network technology (SONET).....	5E991.a.2
Synchytrium endobioticum.....	1C354.b.9
Syntactic foam, underwater use	8C001
Synthetic crystalline laser host material	6C005
Synthetic diamond material	6C004.f
Synthetic aperture radar (SAR).....	6A008.d
Systolic array computers/assemblies/components	4A004.a
T-2 toxin.....	1C351.d.15
Tanks, austenitic stainless steel.....	2B999.n
Tanks, chemical storage (capacity greater than 100 L)	2B350.c
Tanks, monel.....	2B999.f
Tanks, stainless steel	2B999.g
Tank turret rings and sprockets induction hardening machines.....	2B018.m
Tank turret bearing grinding machines	2B018.s
Tantalum crucibles coated with tantalum carbide/nitride/boride.....	2A225.c
Tantalum made or lined crucibles.....	2A225.b
Tape designed for testing recording equipment of entry 3A002a.....	3A002.a
Tape bonders, stored program controlled equipment	3B991.b.3.b
Tape recording equipment	3A002.a
Tape-laying machines	1B101.b

Description	ECCN Citation
Tape-laying machines	1B001.b
Tar sands	1C981
Tear gas.....	1A984
<i>Technology, see product group E for controls for each category.</i>	
Technology, airborne equipment	7E004.a
Technology, development of frequency hopping techniques	5E001.b.4
Technology, development of spread spectrum techniques	5E001.b.4
Technology, diamond substrate film.....	3E003.d
Technology, for commodities controlled by 8A609, 8B609, or 8C609, or “software” controlled by 8D609	8E609
Technology, for ground vehicles and related commodities in 0A606, 0B606, 0C606 or software in 0D606.....	0E606
Technology, for items controlled by 0A617, 0B617, 0C617, 0D617	0E617
Technology, for items controlled by 8A620, 8B620 or 8D620	8E620
Technology, gas turbine engine components.....	9E003.c, 9E619
Technology, gas turbine engine components.....	9E003.a, 9E619
Technology, helicopter power transfer systems.....	9E003.d, 9E619
Technology, hetero-structure semiconductor development.....	3E003.b
Technology, high output type diesel engines.....	9E003.e
Technology, integration software for expert systems	2E003.e
Technology, machine tool instruction generators	2E003.d
“Technology” specially designed or modified for the “development”, “production” or “use” of equipment controlled by 2A983, or the “development” of software controlled by 2D983	2E983
Technology, superconductive electronic device	3E003.c
Technology, tilt rotor/wing power transfer systems development.....	9E003.d, 9E610.a
Technology, vacuum microelectronic device	3E003.a
TEGDN (Triethylene glycol dinitrate) propellant additive	1C111.c.2
Telecommunications equipment	5A001
Telecommunications equipment, high and low temperature tolerant	5A991.a
Telecommunication equipment not controlled by 5A001	5A991
Telecommunications equipment/system software	5D001.c.1
Telecommunications interception equipment	5A001.f
Telecommunication monitoring equipment	5A001.f
Telecommunication test, inspection and production equipment	5B001
Telecommunications test equipment.....	5B991
Telecommunications transmission equipment, equipment for the development of equipment employing	5B001.b
Telecommunications transmission equipment, software for the development of equipment employing	5D001.d
Telecommunications transmission equipment, technology for the	

Description	ECCN Citation
development of equipment employing	5E001.c
Telemetering & telecontrol equipment for missiles.....	5A101
Television cameras, underwater.....	8A002.d.1.b
Television systems (camera, lights, monitoring and signal transmission equipment), remote operation with submersible vehicle	8A992.a.1
Television cameras, underwater.....	8A002.d.1
Television cameras, underwater	8A002.d.1.a
Television cameras, underwater.....	8A992.a.2
Tellurium (Te).....	6C002.a
Tempest type equipment	5A002.a.4
Tension stretchers for prepgs/preform production	1B101.d
Terminal interface equipment	4A994.i
Terrestrial, marine acoustic equipment.....	6A991
Teschen disease virus.....	1C352.a.14
Test benches/stands, for rockets/motors/rocket engines	9B117
Test, calibration or alignment equipment for equipment controlled by 7A.....	7B001
Test chambers, aerosol challenge	2B352.g
Test equipment - propellants and their constituents	1B115
Test equipment - specially designed for testing finished or unfinished semiconductor devices.....	3B002
Test models for defense articles.....	0A617
Test receivers, microwave	3A002.f
Test tape designed for recording equipment of entry 3A002a.....	3A002.a
Testing equipment, for electronic components	3B992.b.4
Test, inspection, development and production equipment for Category 5 items.....	5B
Tetrodotoxin.....	1C351.d.16
Thallium arsenic selenide (Tl_3AsSe_3 or TAS)	6C004.b.3
Thecaphora solani	1C354.b.11
Thermal ionization mass spectrometers (TIMS).....	3A233.c
Thermal sensors, optical fiber	6A002.d.3
Thermoplastic liquid crystal copolymers.....	1C008.b
Thermoset resin impregnated materials	1C210.c
Thio-ethers, as lubricating fluids	1C006.b.1
Thiodiglycol	1C350.b.20
Thionyl chloride	1C350.c.8
Thrust tabs, thrust vector control subsystems	9A106.c
Thrust vector control sub-system	9A106.c
Thulium-YAG (Tm:YAG) lasers.....	6A005.c.1, c.2 or c.3
Thulium-YSGG (Tm:YSGG) lasers	6A005.c.1, c.2 or c.3
Thumbcuffs	0A983
Thumbscrews	0A983

Description	ECCN Citation
Thyristor devices and modules, solid-state pulsed power switching.....	3A001.g
Tick-borne encephalitis virus (Far Eastern subtype, formerly known as Russian Spring-Summer encephalitis virus)	1C351.a.35
Tick-borne encephalitis virus (Siberian subtype, formerly known as West Siberian virus)	1C351.b.3
Tilletia indica	1C354.b.10
Tilt rotor/tilt wing power transfer system technology	9E003.d, 9E610.a
Tilting spindles for machine tools.....	2B009.c
Time delay general, electronic equipment for	3A999.e
Time interval measurement, electronic equipment for	3A999.e
Time or frequency domain processing & correlation equipment	6A001.a.2.c
TIMS (Thermal ionization mass spectrometers).....	3A233.c
Tires (aircraft)	9A610.y.1
Tires (ground vehicles), except run flat	0A606.15
Titanium alloys	1C002.b.3
Titanium alloys, as tubes/solid forms/forgings	1C202.b
Titanium alloy/powder or particulate form	1C002.c.1.c
Titanium aluminides	1C002.a.2
Titanium-based alloys	1C002.b.3
Titanium doped sapphire laser host material	6C005.a
Titanium-sapphire (Ti: Al ₂ O ₃) lasers	6A005.c.1, c.2 or c.3
Titanium-stabilized duplex stainless steel 9Ti-DSS).....	1C118
TMETN (trimethylolethane trinitrate)	1C111.c.4
Tooling for powder metallurgy rotor component manufacture	9B009
Torpedo nets.....	8A620.e
Torquemeter assembly software	9D619.b.9
Torture, specially designed implements of	0A983
Tow-placement machines	1B001.g
Towed acoustic hydrophone arrays	6A001.a.2.b
Toxic gas monitoring systems	2B351
Toxins	1C350, 1C351, 1C355 or 1C395
Tracking radar	6A008.1.1
Tracking systems, precision	6A108.b.1
Tracking systems	6A008.1
Tractors and parts.....	9A990
Transceivers, radio	5A001.b.2 through 10
Transceivers, radio	5A991.b.6 or 7
Transcoders (translation encoders)	5A991.b Note a.6
Transducers, wall skin friction	9B008
Transducers, acoustic projectors	6A001.a.1.c
Transient recorders (Waveform digitizers).....	3A002.a.5 or 3A292.d

Description	ECCN Citation
Transistor test equipment, S-parameter measurement	3B002.a
Transistors, microwave	3A001.b.3
Translation encoders (transcoders)	5A991.b Note a.6
Transmission fluids, automatic	1C980
Transmission equipment	5A991.b
Transmission equipment for Improvised Explosive Devices (IED)	5A001.h
Transmissions for tracked combat vehicles	0A606.d
Transmultiplex equipment	5A991.b Note a.9
Traveling wave tubes (TWTs), industrial	3A001.b.1.a
Tributyl phosphate	1C999.d
Triethanolamine	1C350.c.9
Triethanolamine hydrochloride.....	1C350.d.20
Triethyl phosphite	1C350.c.10
Triethylene glycol dinitrate (TEGDN).....	1C111.c.2
Triggered spark-gaps	3A228.b
Triggers, high voltage	3A999.c
Trimethyl phosphite	1C350.c.11
Tritium, compounds & mixtures.....	1C235
Tritium plant or facilities equipment	1B231.b
Tritium production recovery, extraction & concentration handling facilities or plant.....	1B231.a
Trusted Computer System Evaluation Criteria (TCSEC) capability	5A002.f
Tubes, gas krytron	3A228.a
Tubes, vacuum sprytron	3A228.a
Tunable band-pass filters	3A001.b.5
Tunable lasers	6A005.c
Tunable lasers, solid state	6A005.c.1, c.2 or c.3
Tungsten alloys	1C004
Tungsten alloy, parts	1C226
Tungsten carbide, parts	1C226
Tungsten & molybdenum metal & alloys.....	1C117
Tungsten, parts	1C226
Turbines for use in nuclear reactors.....	2A290.a
Turbines, aero gas engines, test software.....	9D004.b, 9D619
Turbines, gas aero engines	9A001, 9A619.a
Turbo prop engines	9A619.a
Turbocompound engines.....	9A101
Turboexpanders and turboexpander-compressors	1B232
Turbofan & turbojet engines, lightweight.....	9A101, 9A619
Turning machines for optical quality surfaces	2B992.a
Turning machines (CNC).....	2B991.d.1

Description	ECCN Citation
Turning machines.....	2B201.c
Turning machines (CNC).....	2B001.a
TV cameras, radiation-hardened	6A203.c
TV cameras, radiation-hardened, not specified in 6A203	6A999.b
Two dimensional focal plane arrays	6A002.a.3
TWTs (Traveling Wave Tubes)	3A001.b.1.a
UAVs (non-military).....	9A012.a
UAV (military) production facilities	9B610.c
Ultrasonic test equipment for nuclear reactors	2A291.d
Underwater breathing apparatus, self-contained.....	8A992.h
Underwater cameras, photographic	8A002.d, e or f
Underwater camera equipment, n.e.s.....	8A992.d
Underwater communications systems.....	5A001.b.1
Underwater ElectroMagnetic Receivers (UEMR)	6A006.e
Underwater ElectroMagnetic Receivers (UEMR) software	6D003.f.3 or f.4
Underwater electric field sensors.....	6A006.b
Underwater lights.....	8A992.j
Underwater noise reduction technology	8E002
Underwater (propeller) noise reduction software	8D002
Underwater propulsion equipment.....	8A992.j
Underwater rebreathing apparatus	8A620.f
Underwater robots, computer controlled	8A002.h
Underwater sonar navigation systems	7A008
Underwater systems or equipment and parts, not controlled by 8A002	8A992
Underwater television cameras	8A992.a.2
Underwater vehicles, industrial	8A001
Underwater velocity measurement equipment.....	6A001.b
Underwater vessel positioning systems, acoustic	6A001.a.1.d
Underwater vision systems	8A002.d
Underwater vision systems	8A992.a
Unmanned aerial vehicles, not specified in 9A102	9A120, 9A610
Unmanned aerial vehicles and associated systems, production equipment	9B010, 9A610
Unmanned aerial vehicles, associated equipment, systems, and components	9A012.b, 9A610
Unmanned air vehicle systems (UAVs) Non-military	9A012.a
Unmanned tethered submersible vehicles.....	8A001.c
Unmanned untethered submersible vehicles.....	8A001.d
Uranium, depleted.....	1A290
Uranium titanium alloys	1C004
Urine collection bags/pads/cups/pumps for military aircraft.....	9A610.y.21
Vaccines and immunotoxins	1C991
Vacuum furnaces	2B226

Description	ECCN Citation
Vacuum furnaces	2B227
Vacuum induction furnaces	2B226
Vacuum induction furnace, power supplies.....	2B226
Vacuum melting, remelt & casting furnaces.....	2B227
Vacuum microelectronic device development/production technology.....	3E003.a
Vacuum pumps	2B231
Vacuum pumps	2B350.i
Vacuum tubes, electronic microwave	3A001.b.1
Vacuum sprytron tubes	3A228.a
Vacuum valves, piping, flanges, gaskets	2B999.k
Valve seats, made from fluoroelastomers	1A001.c
Valves, austenitic stainless steel	2B999.n
Valves, bellows seal.....	2A226
Valves, bellows	2B350.g
Valves (check) for hydraulic and pneumatic systems in military aircraft	9A610.y.4
Valves, double-seal	2B350.g
Valves, of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A292
Valves, diaphragm	2B350.g
Valves, monel	2B999.f
Valves, multiple seal incorporating a leak detection port.....	2B350.g
Valves, non-return (check).....	2B350.g
Valves, stainless steel.....	2B999.g
Valves, vacuum.....	2B999.k
Variola virus.....	1C351.a.36
Vector processing unit technology.....	3E002
Vector processors/assemblies	4A003
Vehicle position determination software	6D103
Vehicles, "specially designed" for a military use	0A606.a
Vehicles, unarmed, off-road, and armored	0A606.b.1
Velocity interferometers (VISARs)	6A225
Velocity measurement equipment, underwater.....	6A001.b
Venezuelan equine encephalitis virus	1C351.a.37
Ventilated full or half (protective clothing) suits.....	2B352.f.1
Ventilated propellers	8A002.o.1.a
Verocytotoxin producing E. coli (VTEC)	1C351.c.17
Verotoxin	1C351.d.17
Vesicular stomatitis virus.....	1C352.a.15
Vessels, austenitic stainless steel	2B999.n
Vessel positioning systems, acoustic	6A001.a.1.d
Vessel noise reduction equipment	8A002.o.3
Vessels, marine	8A001, 8A609, 8A620

Description	ECCN Citation
Vessels, marine systems or equipment	8A992
Vessels, monel	2B999.f
Vessels, stainless steel	2B999.e
Vests, bulletproof & bullet resistant	1A005
Vibration test equipment, acoustic	9B006
Vibration test equipment, parts and components	9B990
Vibration test equipment using digital control techniques	2B116
Vibrio cholerae.....	1C351.c.19
Video cameras incorporating solid state sensors	6A003.b.1
Vinylidene fluoride copolymers	1C009.a
Vinylidene fluoride copolymers, components of.....	1A001
virulans, fungi (<i>Colletotrichum kahawae</i>)	1C354.b.1
Virus protection software.....	5D992
Viruses	1C351, 1C352 or 1C353
Viruses, animal pathogens	1C352.a
Viruses, human pathogens	1C351.a
Viruses, plant pathogens	1C354.c
Viscous software, 2D or 3D engine flow modeling.....	9D004.a
Viscum Album Lectin 1 (Viscumin).....	1C351.d.18
Vision systems, underwater	8A992.a
Vision systems, underwater	8A002.d
Voice print identification and analysis equipment and parts	3A980
Volkensin toxin.....	1C351.d.19
Wafer handling systems, semiconductor	3B001.e
Wafer processing, semiconductor manufacture	3B001.e
Wafer probing equipment	3B992.b.3
Wafer production align and expose equipment	3B991.b.2.f
Wafers, semiconductor with function determined	3A001.a
Wafers, comprising multiple epitaxially grown layers	3C001
Wall skin friction transducers	9B008
War implement machinery, equipment, gear, and specially designed parts and accessories therefor	2B018
Water (deep) fording kits for ground vehicles	0A606.e
Water jet cutting machines (CNC).....	2B001.e.1.a
Water jet (pumpjet) propulsion systems	8A002.p
Water tanks (potable) and accessories for military aircraft	9A610.y.17
Water tanks (potable) and accessories for submersible vessels.....	8A620.y.7
Water tanks (potable) and accessories for surface vessels of war	8A609.y.7
Water tunnels, propulsion model acoustic field measurement	8B001
Water-hydrogen sulphide exchange tray columns	1B229
Water-screw propellers	8A002.o.1

Description	ECCN Citation
Wave division multiplex equipment	5A991.b.5
Waveform digitizers (Transient recorders)	3A002.a.5
Wax pattern preparation equipment, ceramic shell	9B991.e
Weaving machines	1B001.c
Weight belts	8A992.i
Welders, MIG	2B999.d
Welders, E-beam.....	2B999.e
Welding machines, laser	2B999.c
Western equine encephalitis virus	1C351.a.38
Western red cedar, logs and timber.....	1C988
Wet-spinning equipment for refractory ceramics	1B101.c.3
Wet-spinning equipment for refractory ceramics	1B001.d.3
Wetsuits.....	8A992.i
Wide-swath bathymetric survey systems	6A001.a.1
Wigglers (free electron laser magnet) manufacturing or inspection equipment.....	6B995.a.1
Wind tunnel aero-model technology.....	9E003.b.1
Wind tunnel, control systems.....	9B005
Wind tunnels, usable for missiles	9B105
Winding machines, fiber optic gyro coil.....	7B003
Windows, glass for nuclear radiation shielding	1A227
Windows (ground vehicle), except those for armored vehicles	0A606.y.16
Windshield water and wiper systems for military aircraft.....	9A610.y.22
Work stations, as computers having a CTP above 260 Mtops	4A003.b
X-ray converters.....	1A999.b
X-ray equipment for projection image transfer	3B991.b.2.g
X-ray generators, radiographic	3A201.c
X-ray machines, flash	3A999.c
X-ray (non planar) inspection equipment, rocket motors	9B007
Xanthomonas albilineans	1C354.a.1
Xanthomonas axonopodis pv. citri (Xanthomonas campestris pv. citri A) (Xanthomonas campestris pv. citri).....	1C354.a.2
Xanthomonas oryzae.....	1C354.a.3
Xanthomonas oryzae pv. oryzae (syn. Pseudomonas campestris pv. oryzae)	1C354.a.3
Yellow fever virus.....	1C351.a.39
Yersinia pestis	1C351.c.20
Yttrium oxide (yttria) (Y_2O_3), crucibles made or coated	2A225.a.8
Zinc germanium biphosphide	6C004.b.4
Zinc germanium diphosphide	6C004.b.4
Zinc germanium phosphide.....	6C004.b.4
Zinc selenide (ZnSe), substrate blanks	6C004.a
Zinc sulphide (ZnS), substrate blanks.....	6C004.a

Description	ECCN Citation
Zirconium fluoride (ZrF ₄) glass	6C004.e
Zirconium metal particulate	1C111.a.2.a.1
Zirconium metal, alloy, compounds, or manufacturers	1C234
Zirconium oxide (zirconia) (ZrO ₂) made/coated crucibles	2A225.a.9
Zoonotic pathogens and “toxins”	1C351

Note: Prior to October 15, 2013, the CCL contained certain ECCNs that were only included as cross references to items subject to the export control regulations administered by the Nuclear Regulatory Commission. ECCNs formerly listed on the CCL that, as of October 15, 2013 were subject to the export licensing authority of the Nuclear Regulatory Commission at 10 CFR part 110 are: 0A001, 0B001, 0B002, 0B003, 0B004, 0B005, 0B006, 0C001, 0C002, 0C004, 0C005, 0C006, 0C201 and 1C012. See Section § 774.1(b) for additional information.